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BILATERAL BLIND EPITHELIALIZED TRACTS ASSOCIATED WITH THE INFER--ETC(U)  
FEB 82 W H STALKER, G W ALLEN

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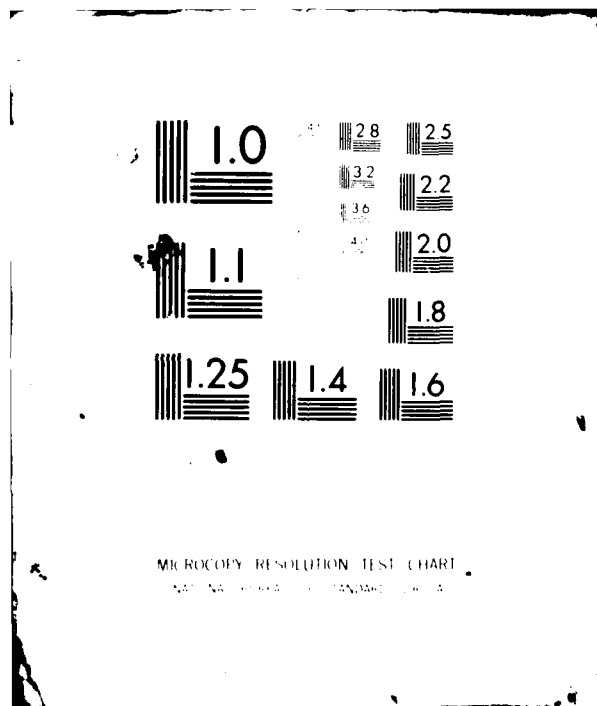
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BILATERAL BLIND EPITHELIALIZED TRACTS  
ASSOCIATED WITH THE INFERIOR LABIAL FRENUM:  
REPORT OF CASE

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# ABSTRACT

Upon examination of a 45-year-old male, bilateral, blind, epithelial-lined tracts were found on the alveolar mucosa in proximity to the inferior labial frenum. These structures were surgically excised and examined histologically. This article represents the first report of blind mucosal pits in this location.

## INTRODUCTION

Blind pits and sinuses are uncommon developmental anomalies which are occasionally encountered at selected sites in the oral and paraoral tissues. They are most commonly located on the lower lip, but they have also been reported in association with the upper lip, the upper labial frenum, the labial commissures, the soft palate, and the pterygomandibular fold area.<sup>1-3</sup> This article describes the previously unreported phenomenon of bilateral, blind, epithelial-lined tracts on the alveolar mucosa, in proximity to the inferior labial frenum.

## CASE REPORT

A 45-year-old white male presented for a routine examination. When the lower lip was reflected, small pits were noted bilaterally in the area of the inferior labial frenum (Fig 1). The patient stated that he had not noticed these structures before, nor had they ever been a problem to him. Probing with a gutta percha point revealed that the pits were blind tracts unassociated with any teeth. Radiographic

examination demonstrated no evidence of periapical pathology in the area of the pits (Fig 2). The mandibular anterior teeth were normal when tested for vitality, and the patient had no recollection of any pulpal symptoms or trauma to this area. No other developmental anomalies involving the structures of the head and neck were noted. Since the patient had advanced generalized periodontal disease requiring surgery in all four quadrants, it was decided to excise these duct-like structures in order to study their exact nature. Informed patient consent was obtained for this procedure.

The tracts were surgically removed (Fig 3), and a gutta percha point was placed in the structure on the left to ensure its patency. Following fixation in 10% formalin, the gutta percha point was removed and the specimen was serially sectioned in an attempt to demonstrate the entire tract. The sections were then stained with hematoxylin and eosin.

Histologically, the structure was found to be a blind pit measuring approximately 1.5 mm in depth and lined by normal stratified squamous epithelium of varying thickness (Fig 4). The superficial lamina propria was lightly sprinkled with a population of chronic inflammatory cells distributed in a random fashion. Neither minor salivary gland nor sebaceous gland elements were noted in the adjacent submucosal tissue.

## DISCUSSION

The occurrence of mucosal pits in association with the inferior labial frenum is an unusual phenomenon which has not been reported to date. Although the clinical significance of these lesions is probably minimal, their location on the alveolar mucosa requires elimination of periapical pathology as a contributing factor. Draining sinus tracts or partially healed patent sinus tracts associated with periapical pathology may appear clinically as blind pits<sup>4</sup>, but their presentation as bilaterally symmetrical structures is highly unlikely.

Watanabe, et al<sup>5</sup>, refer to evidence which suggests epithelial pearls may play a role in the formation of cavities and fistulous canals when located near the epithelial margin. Such a mechanism is plausible in accounting for the epithelial tracts of this case, especially since, during the initial examination, a white cheesy material resembling keratin was retrieved from the pit on the right. This material was not salvaged for histologic examination. While the role of superficial, keratinizing cystic structures is a consideration, this possibility is again unlikely in view of the bilateral mirror-image presentation of the tracts.

The most inviting explanation for oral pits at this location would be a simple defect of development. During



embryogenesis paired mandibular processes merge at the midline causing a gradual elimination of the median sulcus.<sup>6</sup> While a true fusion of the processes does not occur, the mechanism may offer an opportunity for persistence of epithelium in the medial regions.

#### SUMMARY

Blind epithelial lined tracts are rare developmental anomalies which have been reported in the oral cavity and adjacent structures. Their presentation as bilaterally symmetrical pits in the vicinity of the inferior labial frenum has not been previously described. The mechanism responsible for development of these structures is not clear, but they most likely result from entrapment or persistence of epithelium during embryogenesis.

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## ILLUSTRATIONS

Fig 1: Bilateral mucosal pits in close proximity to the inferior labial frenum.

Fig 2: Periapical radiograph demonstrating severe periodontal disease, but absence of periapical pathology.

Fig 3: Postoperative appearance following periodontal surgery and excision of the mucosal pits.

Fig 4: Photomicrograph showing a blind tract lined by stratified squamous epithelium. The superficial lamina propria is infiltrated with a population of chronic inflammatory cells. (Hematoxylin and eosin, x40)

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